ABSTRACT OF THE DISCLOSURE

A voice sound transmitting and receiving unit having an earpiece that is adapted for insertion into external auditory canal of a user, the earpiece being operatively linked to a cradle. The cradle is operatively linked to a host device and capable of sending signals from the host device to the earpiece, receiving signals from the earpiece, and sending them to the host device. The cradle is preferably linked to the earpiece via a wireless linkage. The earpiece includes a sensor, which may be a bone conduction sensor or an air conduction sensor, or both. The bone conduction sensor is adapted to operatively contact a portion of the external auditory canal to convert bone vibrations of voice sound information into electrical signals. The air conduction sensor resides within the external auditory canal and converts air vibrations of the voice sound information into electrical signals. In its preferred form, a speech processor samples output from the bone conduction sensor and the air conduction sensor to filter out noise and select a pure voice sound signal for transmission. The earpiece may also be equipped with a speaker and a receiver. The cradle may also be equipped with a transmitter to enable two-way communication.